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September 6, 2026 05:24 PM GMT

Greater China Semiconductors | Asia Pacific

SEMICON Taiwan 2026 key takeaways - we need more

AI semi capex spending in Taiwan remains strong into 2027 to solve the supply chain bottleneck. Keep OW on TSMC, MediaTek, Hon Precision, Allring, MPI, Winway, etc.

Titans of Taiwan AI semi supply chain - key message from the CEO Forum fireside chat – Taiwan is still one of the bottlenecks of AI infrastructure buildout. On the stage, TSMC Deputy Co-COO Mr. Hou said that he had never seen demand growing and changing this frequently as it has over the past six months, while the tool delivery from WFE partners are still not enough. MediaTek CEO Mr. Tsai was asking for more capacity support from ASE, TSMC, and Unimicron.

Why investors came to this trade show in Taiwan: We believe the tech industry and capital markets are finding ways to keep AI hardware spending sustainable in coming years. With memory becoming the major bottleneck and cost item for AI capex, investors are checking whether technologies can improve AI computing efficiency, for example, CPO to replace copper connectors in XPU scale-up. All in all, the goal is to reduce per-token cost. Please see following section for details.

Key focus areas during SEMICON Taiwan:

1. **Silicon photonics** for AI networking and testing process development : In our previous report, AI Supply Chain: GPU Architecture Optimization Given Memory Shortage and Supernode Challenge, we indicated that future GPU/ASIC scale-up would depend on CPO/NPO ("inter-rack CPO connectivity remains Nvidia's preferred direction"). For example, the NV576 Rubin Ultra in 2027 may use CPO switch trays to connect eight NVL72 server racks. Silicon Photonics and PIC (Photonic integrated circuit), lasers, CPO, and related testing present large investment opportunities.
2. **Memory optimization** from high cost : Instead of adding density, increasing bandwidth and fully utilizing existing memory resources has become the key technology trend. Our recent supply chain checks suggest that Rubin Ultra CPU is highly likely to use 8-Hi HBM4, around one-third fewer than 12-Hi in Rubin. But by increasing HBM4 base-die units and migrating to HBM4e, plus some software optimization, total memory bandwidth should be sufficient for a token output increase.
3. **"More than Moore"-** Panel-level packaging and Intel EMIB-T - We visited the Toray (Toray Industries covered by Takato Watabe) booth to check EMIB-T substrate manufacturing yield, because the company supplies the TCB bonder. We expect Intel to provide technical support, and expect MediaTek's TPU v9 (HumuFish) to get sufficient EMIB-T substrate supply in 2028.
4. Although it wasn't the main focus of the SEMICON , we think **TSMC**'s Moore's Law migration (for energy efficiency) and **MediaTek**'s ASIC enabling (to save on chip budgets) are keys to make AI capex more sustainable.

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Asia Pacific
Industry View **Attractive**

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Need for more capacity to support strong AI semi demand into 2027

Titans of Taiwan AI semi supply chain - CEO Forum

The discussion focused on how strong AI demand is leading to ongoing undersupply from the whole semi industry . We believe AI demand remains strong and is able to support strong revenue growth for ASE, TSMC, and MediaTek in coming years. At the same time, Taiwan's semi supply chain is also expanding capex and opex aggressively to catch up to the demand.

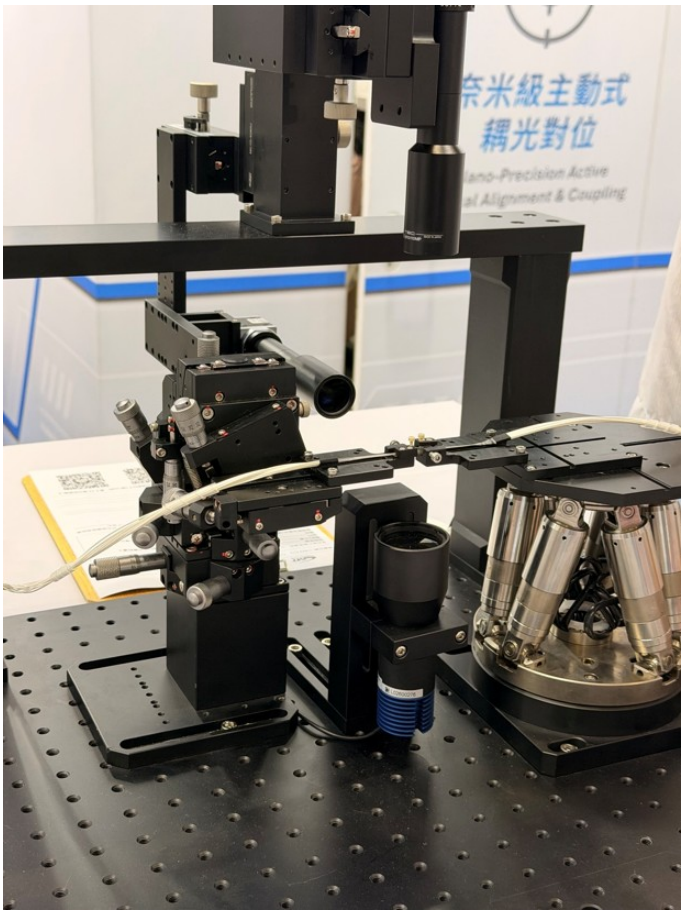
Stock ideas around SEMICON Taiwan: We remain OW on TSMC given its dominance in leading-edge foundry. MediaTek remains our Top Pick given its competitive ASIC design service. We hosted a booth tour to visit Hon Precision, AllRing, MPI, and WinWay to cross-check CoWoS and CoPoS expansion plans, as well as optical insertion technology. We are OW on all the above stocks.

Key focus areas during SEMICON Taiwan 2026

1. Silicon Photonics for AI networking and the testing process development:

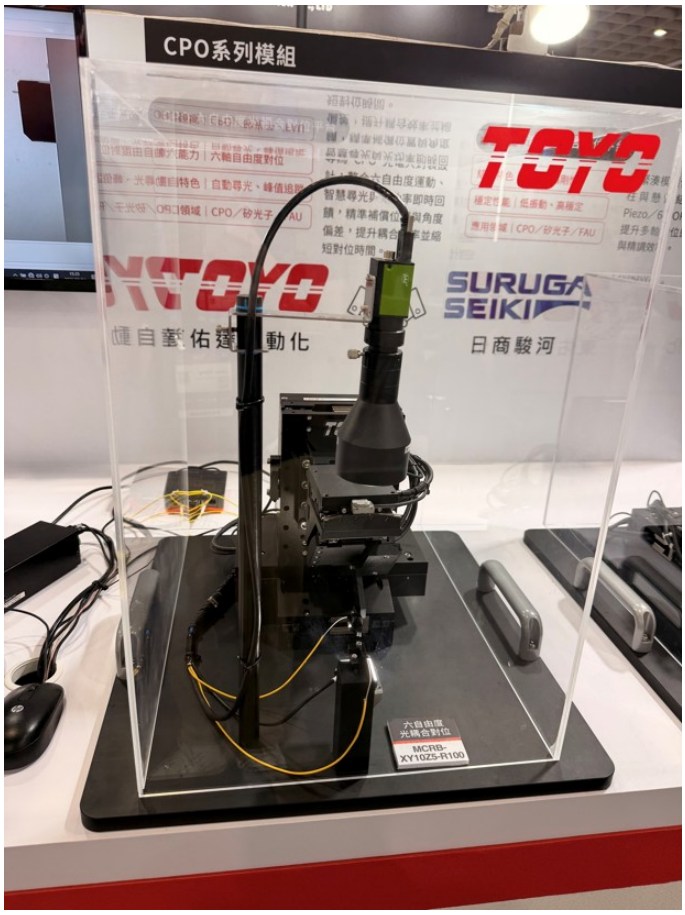
Please also see Semiconductor Production Equipment: SEMICON Taiwan Day 1 – Takeaways from SiPh Seminar from Suzune Tamura. We share the view with Tamura-san that testing is the key challenge for CPO mass production. During SEMICON Taiwan, several companies showcased their solutions or components for CPO testing. Although the solutions might be different, all companies were providing similar information: that CPO testing is still not clearly defined while most of the companies are still trying to get qualified by major customers with their equipment/solutions. The speed and precision of optical alignment remains the key to throughput, and we believe there is still room for improvement.

Exhibit 1: GMT (not covered) High-Precision Hexapod Platform could help for SiPh/CPO alignment



Source: GMT

Exhibit 2: Toyo (not covered) module helps improve the yield rate of optical alignment



Source: Toyo

2. Memory optimization: Meanwhile, memory stacking on logic can improve bandwidth. See Daniel Yen's memory research on 3D stacking and CXL memory pooling technology: Greater China Semiconductors: Memory Innovation – The Focus from SEMICON Taiwan (1 Sep 2026).

Exhibit 3: Customized Memory Solution from Winbond



Source: Winbond

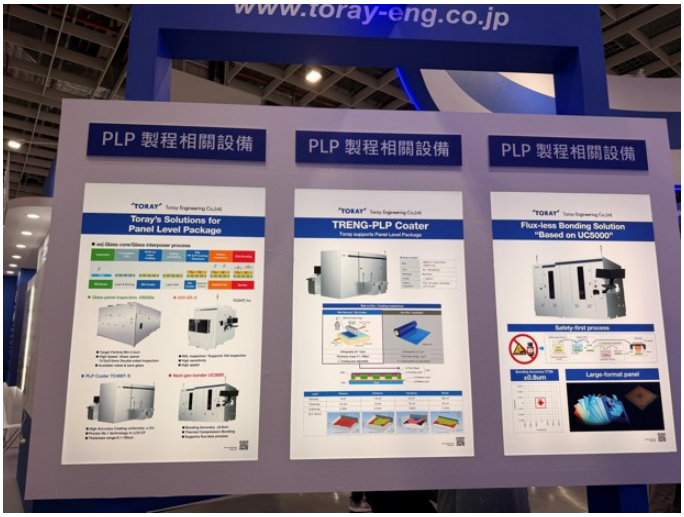
Exhibit 4: AI NPU Chip from Phison



Source: Phison

3. Panel-level packaging, Intel EMIB-T, and TSMC 3.5D CoWoS: We visited the Toray (Toray Industries covered by Takato Watabe) booth to check EMIB-T substrate manufacturing yield, because the company supplies the TCB bonder. Our finding suggests that tool accuracy and supply are not the major issues; rather, it is substrate customers' know-how in aligning silicon-bridge bonding to PCB. We expect Intel to provide technical support, and expect MediaTek's TPU v9 (HumuFish) to get sufficient EMIB-T substrate supply in 2028. For 3D IC packaging, please also see Semiconductor Production Equipment: SEMICON Taiwan Day 2 - Heterogeneous Integration Seminar Takeaways.

Exhibit 5: Panel level packaging related equipment from Toray



Source: Toray

Exhibit 6: UC5000 bonder from Toray, which we believe could be related to Intel EMIB-T substrate production



Source: Toray

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INDUSTRY COVERAGE: Greater China Technology Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRI
Charlie Chan		
ACM Research Inc (ACMR.O)	O (03/07/2023)	
Advanced Micro-Fabrication Equipment Inc (688012.SS)	O (11/06/2023)	
Advanced Wireless Semiconductor Co (8086.TWO)	U (07/14/2025)	
Alchip Technologies Ltd (3661.TW)	O (05/14/2021)	
ASE Technology Holding Co. Ltd. (3711.TW)	O (09/15/2024)	



Cambricon Technology Corporation (688256.SS)	O (04/27/2026)	Rmb1,072.00
CXMT Corp (688825.SS)	O (08/26/2026)	Rmb54.80
Global Unichip Corp (3443.TW)	O (06/24/2026)	NT$5,810.00
GlobalWafers Co Ltd (6488.TWO)	E (05/19/2026)	NT$981.00
Gudeng Precision (3680.TWO)	O (11/25/2025)	NT$518.00
Hua Hong Semiconductor Ltd (1347.HK)	E (03/12/2026)	HK$109.70
Iluvatar CoreX Semiconductor Co., Ltd. (9903.HK)	O (04/27/2026)	HK$383.60
King Yuan Electronics Co Ltd (2449.TW)	O (03/03/2023)	NT$262.00
MediaTek (2454.TW)	O (11/28/2025)	NT$4,415.00
MetaX Integrated Circuits (688802.SS)	E (04/27/2026)	Rmb631.10
Nanya Technology Corp. (2408.TW)	O (05/28/2026)	NT$496.00
NAURA Technology Group Co Ltd (002371.SZ)	O (11/06/2023)	Rmb638.17
OmniVision Integrated Circuits Group Inc (603501.SS)	E (11/17/2025)	Rmb80.25
Phison Electronics Corp (8299.TWO)	E (02/25/2026)	NT$2,015.00
SG Micro Corp. (300661.SZ)	E (11/03/2025)	Rmb106.92
Silergy Corp. (6415.TW)	U (05/19/2026)	NT$428.50
SMIC (0981.HK)	O (10/21/2025)	HK$67.20
TSMC (2330.TW)	O (02/07/2022)	NT$2,410.00
UMC (2303.TW)	O (05/19/2026)	NT$130.00
Vanguard International Semiconductor (5347.TWO)	E (01/14/2026)	NT$150.00
WIN Semiconductors Corp (3105.TWO)	U (07/14/2025)	NT$449.50
Daisy Dai, CFA		
ASMPT Ltd (0522.HK)	O (07/24/2025)	HK$158.60
China Resources Microelectronics Limited (688396.SS)	U (03/02/2026)	Rmb56.55
Empyrean Technology Co Ltd (301269.SZ)	E (01/17/2025)	Rmb89.70
Hangzhou Silan Microelectronics Co. Ltd. (600460.SS)	U (08/25/2025)	Rmb30.34
Hygon Information Technology Co., Ltd. (688041.SS)	O (07/03/2026)	Rmb243.67
Innoscience (2577.HK)	E (10/13/2025)	HK$44.10
JCET Group Co Ltd (600584.SS)	E (01/16/2026)	Rmb67.36
Shanghai Fudan Microelectronics (1385.HK)	O (03/07/2025)	HK$25.72
SICC Co Ltd (688234.SS)	O (03/20/2026)	Rmb97.43
StarPower Semiconductor Ltd (603290.SS)	E (05/14/2026)	Rmb85.60
Unigroup Guoxin Microelectronics Co Ltd (002049.SZ)	U (01/10/2023)	Rmb62.08
Universal Scientific Ind. (Shanghai) (601231.SS)	O (11/05/2025)	Rmb24.73
Yangjie Technology (300373.SZ)	O (06/10/2022)	Rmb86.19
Daniel Yen, CFA		
AP Memory Technology Corp (6531.TW)	O (07/11/2025)	NT$911.00
ASMedia Technology Inc (5269.TW)	U (10/03/2025)	NT$1,430.00
Aspeed Technology (5274.TWO)	O (06/09/2025)	NT$17,470.00
Egis Technology Inc (6462.TWO)	E (01/28/2026)	NT$101.50
Elan Microelectronics Corp (2458.TW)	O (10/03/2025)	NT$133.00
eMemory Technology Inc (3529.TWO)	O (08/18/2026)	NT$2,385.00
Espressif Systems (688018.SS)	O (05/15/2023)	Rmb111.50
GigaDevice Semiconductor Beijing Inc (603986.SS)	O (05/15/2025)	Rmb371.88
Macronix International Co Ltd (2337.TW)	O (09/18/2025)	NT$121.50
Montage Technology Co Ltd (6809.HK)	O (03/18/2026)	HK$261.60
Montage Technology Co Ltd (688008.SS)	O (03/18/2026)	Rmb187.70
Novatek (3034.TW)	U (02/04/2026)	NT$524.00
Nuvoton Technology Corporation (4919.TW)	U (11/10/2025)	NT$120.00
Parade Technologies Ltd (4966.TWO)	O (05/27/2026)	NT$569.00
Powerchip Semiconductor Manufacturing Co (6770.TW)	O (10/27/2025)	NT$68.50
Realtek Semiconductor (2379.TW)	E (01/30/2026)	NT$713.00
Shenzhen Goodix Technology Co Ltd (603160.SS)	U (07/14/2025)	Rmb52.05
Winbond Electronics Corp (2344.TW)	O (05/28/2026)	NT$174.00
WPG Holdings (3702.TW)	O (03/16/2026)	NT$104.00

WT Microelectronics Co. Ltd. (3036.TW)	O (01/27/2026)	NT$192.50
Duan Liu		
Dosilicon Co Ltd (688110.SS)	U (09/06/2024)	Rmb112.94
Shenzhen Longsys Electronics Co Ltd (301308.SZ)	E (02/25/2026)	Rmb347.00
Henry Zhao		
Maxscend Microelectronics Co Ltd (300782.SZ)	U (01/11/2021)	Rmb71.48
Tiffany Yeh		
AllRing Tech Co. (6187.TWO)	O (09/23/2025)	NT$1,305.00
FOCI Fiber Optic Communications Inc (3363.TWO)	O (01/15/2025)	NT$735.00
Himax Technologies Inc (HIMX.O)	E (02/04/2026)	US$13.68
Hon Precision (7769.TW)	O (04/17/2026)	NT$5,980.00
MPI Corporation (6223.TWO)	O (04/17/2026)	NT$5,155.00
Silicon Motion (SIMO.O)	O (05/06/2024)	US$256.21
WinWay Technology Co Ltd (6515.TW)	O (04/17/2026)	NT$7,075.00

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